

REMARKS

Applicants request reconsideration of the subject application in view of the foregoing amendments and the following remarks.

The foregoing amendments, which primarily address the formal rejections set forth in the Office Action, are believed to place the application into condition for allowance, or at least in better form for appeal. The amendments, which Applicants believe will not require further search and/or consideration, were not earlier presented because Applicants earnestly believed the claims to be allowable in their earlier form. Accordingly, Applicants request entry and consideration of the amendments.

Claims 15-34 are pending, of which claims 15 and 25 are independent. Claims 22 and 32 have been withdrawn as being drawn to a non-elected species. Claims 15, 25 and 29 have been amended in order to even more clearly define the invention.

In the Office Action, claims 15-21, 23, 24 and 29 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing non-enabled subject matter. Applicants respectfully traverse this rejection. The specification clearly describes the manner in which the horizontal locator urges the friction surface against the rail. However, without conceding the propriety of this rejection, Applicants have amended claims 15 and 29 to even more clearly recite the manner in which the claimed friction surface is urged against and exerts pressure on the guide rail. Applicants request withdrawal of this rejection.

Claims 15-21, 23-31, 33 and 34 stand rejected under § 112, second paragraph, as allegedly being indefinite. Applicants respectfully traverse this rejection and request withdrawal thereof. The Office Action indicates that it is unclear whether the claims are directed to a guide rail safety device, or such a device in combination with a guide rail. Applicants respectfully disagree. Nowhere in any claim is a guide rail recited positively as a claim element. Throughout the claims, the guide rail is recited inferentially as necessary in order to define the physical features of the claimed safety device.

The Office Action further indicates that recitation in claim 15 regarding the horizontal locator's urging the friction surface against the guide rail at a specified

pressure, is indefinite. As noted above, the claim has been amended, and Applicants believe this rejection is moot.

Claims 15-19, 23-29, 33 and 34 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over US 5,065,845 (Pearson). Claims 15, 19, 23-25, 33 and 34 stand rejected under § 103(a) as allegedly being unpatentable over EP 498 597 A2 (Poon). Claims 16-18, 20, 21, 26-28, 30 and 31 variously stand rejected under § 103(a) as allegedly being unpatentable over either Poon or Pearson, in view of US 5,531,295 (Kopman). These rejections are respectfully traversed.

In the embodiments recited in the claims, the subject invention relates to a guide rail safety device, for an elevator car riding on a non-metallic guide rail, including, inter alia, a wedge having a friction surface aligned for contact with the non-metallic guide rail and at least one horizontal locator for engaging the wedge and urging the friction surface into contact with the non-metallic guide rail so that the friction surface is wedged against the non-metallic guide rail by motion of the elevator car along the non-metallic guide rail. Independent claim 15 recites that the friction surface is sized and the wedge is shaped so that, when urged by the horizontal locator into contact with the non-metallic guide rail, the friction surface is wedged against the non-metallic guide rail with a pressure of not more than approximately 50 psi on the non-metallic guide rail, arresting the motion of the elevator car. Independent claim 25 recites that the friction surface is formed of a material that has a coefficient of friction of at least about 1.0 relative to the non-metallic guide rail. Neither of these aspects of the invention is disclosed or suggested in the cited art.

Neither Pearson nor Poon discloses or suggests a friction surface that is wedged against a guide rail (non-metallic or otherwise) at a pressure of not more than approximately 50 psi on the guide rail, as recited in claim 15. The Office Action asserts that Pearson discloses that the force on the guide rail can be adjusted, and that the device disclosed in Poon is capable of exerting a pressure of not more than approximately 50 psi on the guide rail. However, Pearson does not disclose or suggest that the force can or should be adjusted so that the resulting pressure is at or below 50 psi, much less that the motion of the elevator car would be arrested. And even assuming that the device in Poon is capable of such pressures, there is no suggestion

that such pressures be exerted or that with such a pressure the motion of the elevator car would be arrested.

As noted in the previous amendment, Applicants have found that applying a pressure of 50 psi or less, which is believed to have been counterintuitive to a braking operation, is desirable to avoid damaging a guide rail formed of a material such as concrete, as noted at page 6, line 1 of the subject application.

Therefore, the subject matter of independent claim 15 would not have been obvious in view of the cited documents. Applicants request withdrawal of the obviousness rejection of claim 15.

Further, neither Pearson nor Poon discloses or suggests a friction surface that is formed of a material that has a coefficient of friction of at least about 1.0 relative to the non-metallic guide rail, as recited in independent claim 25. Regarding each document, the Office Action asserts that the disclosed friction surface is "capable of" having such a coefficient of friction, since the recitation of a non-metallic guide rail is given no patentable weight. Applicants respectfully disagree.

Regardless of what material forms the guide rail, there is no suggestion of such a large coefficient of friction between the material of the friction surface and the guide rail. Further, there is no suggestion that the device disclosed in either document be modified to achieve such a coefficient of friction.

Further, even though the non-metallic guide rail is not claimed, its recitation does define structural features of the claimed safety device. These features, such as coefficient of friction, may not be ignored. For example, Applicants draw the Examiner's attention to the discussion in MPEP 2111.02 of *In re Stencil*.

A braking surface coefficient of friction relative to a guide rail is conventionally lower than 1.0, as noted at page 5, line 12 of the subject application. The Examiner has cited no guide rail safety devices having coefficients of friction even remotely approaching 1.0. (For example, U.S. 5,979,615 cited, in the previous Office Action, recites coefficients of 0.15 and 0.25 at col. 1, line 29, and col. 4, line 3, respectively.) Raising the coefficient of friction is not an obvious modification, because doing so would tend to result in much quicker (and more difficult on passengers) elevator car deceleration. However, Applicants have found that raising the coefficient of friction

does permit the braking to be done in a manner that will avoid damaging guide rails formed of a material such as concrete.

Therefore, the subject matter of independent claim 25 would not have been obvious in view of the cited documents. Applicants request withdrawal of the obviousness rejection of claim 25.

Therefore, independent claims 15 and 25 patentably define the invention over the cited art, and are submitted to be allowable.

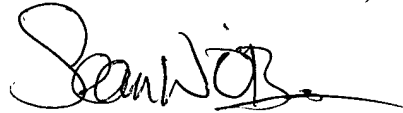
The dependent claims include features in addition to those recited in their respective base claims, and are submitted to be allowable in their own right. For example, claims 20, 21, 30 and 31 recite specific friction surface materials. The Office Action cites to Kopman (relating to a parking brake) as disclosing a friction surface formed from galvanized rubber. However, the only motivation offered in the Office Action for incorporating the Kopman rubber friction surface into the devices of Pearson or Poon is the increased frictional properties taught by the present application. Other than this hindsight reconstruction, the Office Action offers no objective motivation for the asserted combination. Further independent consideration of the dependent claims is requested.

Accordingly, Applicants submit that the subject application is in condition for allowance, and request a notice thereof.

Please charge any additional fees or credit overpayment to Deposit Account No. 15-0750, Order No. OT-4551.

Respectfully submitted,

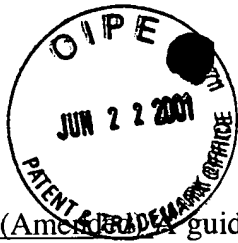
FREDERICK H. BARKER, ET. AL.

A handwritten signature in black ink, appearing to read "Sean W. O'Brien", written over a horizontal line.

Sean W. O'Brien

Registration No. 37,689

Otis Elevator Company
Intellectual Property Department
10 Farm Springs
Farmington, CT 06032
(860) 676-5760



15. (Amended) A guide rail safety device, for an elevator car riding on a non-metallic guide rail, the guide rail safety device comprising:

a housing;

a wedge disposed in the housing, the wedge having a friction surface aligned for contact with the non-metallic guide rail;

at least one horizontal locator disposed in the housing, for engaging the wedge and urging the friction surface into contact with the non-metallic guide rail so that the friction surface is wedged against the non-metallic guide rail by motion of the elevator car along the non-metallic guide rail ~~at a pressure of not more than approximately 50 psi on the non-metallic guide rail;~~ and

an actuator for triggering urging of the friction surface by the horizontal locator, wherein the friction surface is sized and the wedge is shaped so that, when urged by the horizontal locator into contact with the non-metallic guide rail, the friction surface is wedged against the non-metallic guide rail with a pressure of not more than approximately 50 psi on the non-metallic guide rail, arresting the motion of the elevator car.

25. (Amended) A guide rail safety device, for an elevator car riding on a non-metallic guide rail, the guide rail safety device comprising:

a housing;

a wedge disposed in the housing, the wedge having a friction surface aligned for contact with the non-metallic guide rail, the friction surface being formed of a material that has a coefficient of friction of at least approximately 1.0 relative to the non-metallic guide rail;

at least one horizontal locator disposed in the housing for engaging the wedge and urging the friction surface into contact with the non-metallic guide rail so that the friction surface is wedged against the non-metallic guide rail by motion of the elevator car along the non-metallic guide rail; and

an actuator for triggering urging of the friction surface by the horizontal locator.

29. (Amended) The guide rail safety device as claimed in claim 25, wherein the friction surface is sized and the wedge is shaped so as to that, when urged by the horizontal locator into contact with the non-metallic guide rail, the friction surface is wedged against the non-metallic guide rail with ~~exert~~ a pressure of not more than approximately 50 psi on the non-metallic guide rail, arresting the motion of the elevator car.